



FEB 1 0 2014

The Honorable John D. Rockefeller IV United States Senate Washington, DC 20510

Dear Senator Rockefeller:

Thank you for your January 13, 2014, letter requesting assistance from the Centers for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA) regarding the West Virginia Elk River 4-methylcyclohexanemethanol (MCHM) spill. CDC/Agency for Toxic Substance Disease Registry (ATSDR) and EPA have been working closely with the state of West Virginia, as well as other federal agencies, to respond to the spill.

We take your concerns seriously, which is why both CDC and EPA traveled to Charleston, WV on February 5, 2014, to participate in a roundtable with state and local officials, as well as a press conference to discuss the current status of response efforts in WV.

Following the January 17, 2014, phone call with you regarding the best options for CDC assistance in West Virginia, Dr. Vikas Kapil, CDC's Chief Medical Officer and Associate Director for Science at the National Center for Environmental Health/ATSDR, then held a phone briefing for your staff to provide additional technical details regarding our response efforts.

CDC/ATSDR is working directly with the Governor's Office and the West Virginia Bureau for Public Health on the development and release of public health information for the affected community about their water quality. On January 17, 2014, CDC/ATSDR posted information regarding: what is MCHM; what is the acceptable level of MCHM in drinking water; how was the 1 parts per million (ppm) level calculated; what studies were used in calculating the 1 ppm recommendation; and links to additional resources, such as the West Virginia Governor's State Emergency Updates.

At West Virginia's request, CDC/ATSDR sent an Epi-Aid response team to review medical records, survey hospitals, assess disaster epidemiology capacity, and make recommendations. In response to a request from the Federal Emergency Management Agency, CDC/ATSDR deployed an environmental health advisor to provide technical support and guidance on health effects to West Virginia.

In addition, EPA has been providing ongoing assistance to the West Virginia Department of Environmental Protection (WVDEP) to develop air and water monitoring strategies and to implement sampling and analysis plans. EPA is also providing consultation and technical assistance to the West Virginia Department of Health and Human Resources (WVDHHR) on Safe Drinking Water Act requirements and drinking water treatment plant concerns. EPA also assisted with review of safety plans and coordinated efforts with the U.S. Coast Guard and WVDEP on plans for boom and drain systems. In addition, in consultation with WVDEP, EPA also provided assistance regarding the state's site remediation plan development and implementation.

It is encouraging at this point that we do not see indications that long-term health effects are a likely outcome of this incident. However, while supporting WVDHHR, we will continue to learn more and will consult with the state and our federal counterparts as information is available. We will continue to keep your office informed as we learn more from our investigation, and from the information available to our West Virginia and federal partners.

Thank you again for your letter and for your commitment to this important public health issue. As discussed in our call, we will continue to provide you with updates as this urgent and dynamic situation evolves. If you or your staff have any further questions, please contact Dr. Richard Weston in the CDC Washington Office at (202) 245-0600 or Carolyn Levine in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-1859.

Sincerely,

Thomas R. Frieden, MD, MPH

Director, CDC, and

Administrator, ATSDR

Shawn M. Garvin

Regional Administrator

U.S. Environmental Protection Agency

Region III

Final July 3, 2014

Derivation of an Extrapolated Short-term Inhalation Screening Level for 4-Methylcyclohexanemethanol (MCHM – CAS# 34885-03-5)

U.S. Environmental Protection Agency (EPA)
Office of Research and Development (ORD)
National Center for Environmental Assessment (NCEA)
Superfund Health Risk Technical Support Center (STSC)

Background:

Currently, there are no available repeated-dose inhalation toxicity studies on 4-methylcyclohexanemethanol (MCHM) in humans or animals. There is a single short-term repeated-dose oral study conducted in rats. In this study, male and female CD(SD)BR rats (5/sex/dose group) were administered MCHM (purity >96%) via gavage at doses of 0, 25, 100, and 400 mg/kg-day, 5 days per week, for 28 days (Eastman Kodak Company, 1990). The lowest-observed-adverse-effect level (LOAEL) for this study is 400 mg/kg-day based on erythropoietic, kidney (increased tubular degeneration), and liver (increased weight and inflammation) effects. The associated no-observed-adverse-effect level (NOAEL) is 100 mg/kg-day. Detailed descriptions of all available toxicity studies for pure MCHM and crude MCHM can be found on the National Library of Medicine's Hazardous Substances Data Bank (HSDB, 2014).

There are no available toxicity values for MCHM from the U.S. EPA's Office of Solid Waste and Emergency Response (OSWER) recognized Tier 1–3 sources or the International Toxicity Estimates for Risk (ITER) database. Recently, the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry (CDC/ATSDR) established a short-term health advisory for MCHM in drinking water in and around Charleston, West Virginia after approximately 7500 gallons of the chemical was spilled into the Elk River (CDC/ATSDR, 2014). CDC/ATSDR's short-term drinking water advisory for MCHM of 1 part per million (ppm) is based on the NOAEL of 100 mg/kg-day from the aforementioned 28-day gavage study in rats. The drinking water (DW) advisory was derived to be protective of children as follows:

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DW Advisory = (NOAEL \times BW) \div (UF<sub>c</sub> \times Intake)

DW Advisory = (100 mg/kg-day \times 10 kg) \div (1000 \times 1 L/day)

DW Advisory = 1 mg/L (or 1 ppm)
```

Where:

- NOAEL = No-observed-adverse-effect level from 28-day gavage study in rats
- BW = Body weight of a child (10 kg)
- UF_C = Composite uncertainty factor (UF_A × UF_H × UF_D) applied to account for (1) uncertainty in extrapolating from laboratory animals to humans (i.e., interspecies variability; UF_A = 10), (2) human-to-human variability in susceptibility and consideration of possible effects on vulnerable populations, including pregnant women and children (UF_H = 10), and (3) the limited availability of data and database deficiencies e.g., lack of reproductive and developmental toxicity studies (UF_D = 10).
- Intake = Estimated drinking water intake of a 10 kg child (1 L/day).

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Derivation of an Extrapolated Short-term Inhalation Screening Level:

Assessing the potential public health impacts of inhalation exposures to MCHM is difficult due to the lack of any available inhalation toxicity data. However, using CDC/ATSDR's short-term DW advisory for MCHM of 1 mg/L (or 1 ppm), it is feasible to conduct an oral route-to-inhalation route extrapolation in an attempt to estimate a short-term inhalation screening level. The methodologies and derivations presented herein were reviewed by scientists within the U.S. EPA and independently peer-reviewed by scientists at the CDC/ATSDR, National Institute of Environmental Health Sciences (NIEHS), National Toxicology Program (NTP), and National Library of Medicine (NLM).

Applying the 1 L/day estimated intake from drinking water of a 10 kg child used to derive CDC/ATSDR's DW advisory of 1 mg/L (or 1 ppm), this DW advisory value can be expressed in mg/kg-day as follows:

DW advisory $(mg/L) \times Intake \div BW = DW advisory (mg/kg-day)$

 $1 \text{ mg/L} \times 1 \text{ L/day} \div 10 \text{ kg} = 0.1 \text{ mg/kg-day}$

In the absence of any available pharmacokinetic information on MCHM, route-to-route extrapolation of CDC/ATSDR's DW advisory (derived to be protective of children) to an extrapolated short-term inhalation screening level can then be derived as follows:

Extrapolated Short-term Inhalation Screening Level = DW advisory \times (BW \div IR)

= $0.1 \text{ mg/kg-day} \times (10 \text{ kg} \div 17.3 \text{ m}^3/\text{day})$

 $= 0.06 \text{ mg/m}^3$

Where:

- BW = Body weight of a child (10 kg)
- IR = Inhalation rate for a child 1 to < 2 years old (U.S. EPA, 2011; calculated using the recommended mean light intensity short-term exposure value for inhalation of 1.2×10^{-2} m³/min × 60 min/hr × 24 hr/day).

Extrapolated Short-term Inhalation Screening Level converted to ppm (in air):

Air Conc (ppm) = Air Conc (mg/mg³) ÷ Molecular Weight of MCHM × 24.45

Air Conc (ppm) = $0.06 \text{ mg/m}^3 \div 128.21 \times 24.45$

Air Conc (ppm) = 0.01 ppm (in air)

Important Limitations and Uncertainties:

It is important to note that the information presented herein provides an extrapolated short-term inhalation screening level for MCHM that is not intended to provide conclusive estimates of actual risk from inhalation exposures of MCHM, or generate remediation/cleanup goals. Additionally,

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cognizance of the several limitations and uncertainties associated with the derivation of this extrapolated short-term inhalation screening level is essential.

First, an oral route-to-inhalation route dosimetric extrapolation does not account for efficiency of respiratory tract deposition and distribution of a chemical, biological and physicochemical factors, and other potential inhalation exposure scenarios (e.g., continuous versus intermittent exposure) that may affect uptake and clearance. Therefore, this simple extrapolation method implicitly assumes that the route of exposure is unrelated to the delivered target organ dose, which is not supported by the fundamental tenets of dosimetry or toxicokinetics. Additionally, if MCHM undergoes a first-pass effect, the blood concentration of the parent compound from oral exposure may be lower than the blood concentration following inhalation exposure at an equivalent concentration.

Second, although CDC/ATSDR used the best available repeated-dose oral toxicity study conducted on MCHM in animals to derive its DW advisory, the test compound used in the study was pure MCHM which is only comprised of the major constituent of crude MCHM (the actual compound that was spilled, composed of a mixture of synthetic chemicals).

Third, although the database lacks inhalation studies on MCHM, a potential for pulmonary portal-of-entry effects may exist as indicated by the observation that MCHM is a dermal and ocular irritant in animal studies (HSDB, 2014).

Finally, due to the short-term-duration of the oral study used to derive CDC/ATSDR's DW advisory and the uncertainty associated with applying this value to longer duration oral exposures, the extrapolated short-term inhalation screening level is not applicable to longer-term/chronic-duration inhalation exposures.

References:

CDC/ATSDR (Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry). (2014). Summary Report of Short term Screening Level Calculation and Analysis of Available Animal Studies for MCHM.

Eastman Kodak Company. (1990). Four-week oral toxicity study of 4-methylcyclohexane methanol in the rat.

HSDB (Hazardous Substances Data Bank). (2014). 4-Methylcyclohexanemethanol. Bethesda, MD: National Library of Medicine. http://toxnet.nlm.nih.gov/cgi-bin/sis/search/r?dbs+hsdb:@term+@DOCNO+8182

U.S. EPA (U.S. Environmental Protection Agency). (2011). Exposure Factors Handbook 2011 Edition (Final). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-09/052F.

Extended Spill Summary Report for DataID #1516584

Report Date: 1/10/2014

Report Time: 8:57 AM

Hotline Log Entry Information

Data ID: 1516584

Date Of Report: 09-JAN-14 19:16

NRC #: 1070627

State #:

ERNS #:

Material Type: Haz

Receiver: d matlock

Material / Amount:

METHYLCYCLOHEXANE (0 UNKNOWN AMOUNT);

Location:

City:

County: KANAWHA

State: WV

Source of Pollution:

WEST VIRGINIA AMERICAN WATER

Water Body:

ELK RIVER

ASSESSMENT TO A STATE OF THE ST

State Or EPA Responded: WVDEP and EPA

Initial EPA Action:

WVDEP responded to odor complaint. WV Governor declared emergency

for severla counties. OSC Matlock will be on scene to WV EOC Friday,

1/10.

Status:

1 - Pending

URL:

Associated Action Reports

DataID: 0680179

Date: 2014/01/10	Time: 00:04	Submitted by: HQ Duty Officer
Duty Officer/Responder Name: d matlock	NRC Report #: 1070627	Hotline Log DataID: 1516584
Act	ion Information	
Description: OSC Matlock w	Friday, 1/	10. Matlock and EPA Rep in the
Per	rson Contacted	
Name:	Mike Dor	sey

Organization:

WVDEP

Phone #:

Associated NRC Report

NATIONAL RESPONSE CENTER 1-800-424-8802

GOVERNMENT USE ONLYGOVERNMENT USE ONLY***

Information released to a third party shall comply with applicable federal and/or state Freedom of Information and Private Presedom of Information and Priva

Incident Report # 1070627

INCIDENT DESCRIPTION

*Report taken by: CIV KEVIN WILLIAMS at 19:16 on 09-JAN-

Incident Type: STORAGE TANK

Incident Cause: UNKNOWN
Affected Area: ELK RIVER

Incident occurred on 09-JAN-14 at 10:47 local incident time.

Affected Medium: WATER ELK RIVER

REPORTING PARTY

Name:

WILLIAMS

Organization: NATIONAL RESPONSE CENTER

WASHINGTON, DC

PRIMARY Phone: (800) 4248802

Type of Organization: FEDERAL GOVERNMENT

SUSPECTED RESPONSIBLE PARTY

Name:

UNKNOWN

Organization: WEST VIRGINIA AMERICAN WATER

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

ELK RIVER County: KANAWHA 1015 BARLOW DRIVE

State: WV

RELEASED MATERIAL(S)

CHRIS Code: MCY Official Material Name: METHYLCYCLOHEX

DESCRIPTION OF INCIDENT

RESIDENTS IN CHARLESTON AND SURROUNDING COUNTIES WERE TOLD THURSDAN NOT TO DRINK, COOK WITH OR WASH WITH WATER SUPPLIED BY WEST VIFAMERICAN WATER, FOLLOWING A LEAK EARLIER IN THE DAY AT A CHEMICAL ALONG THE ELK RIVER.

ANY WATER SUPPLIED BY WEST VIRGINIA AMERICAN WATER IN KANAWHA, I BOONE, JACKSON AND LINCOLN COUNTIES WAS TO BE USED ONLY FOR FLU TOILETS AND PUTTING OUT FIRES.

THE STATE OF EMERGENCY INCLUDES WEST VIRGINIA AMERICAN WATER CUST-BOONE, LINCOLN, KANAWHA, JACKSON AND PUTNAM COUNTIES, ACCORDING STATION WSAZ.

RESIDENTS WERE TOLD NOT TO DRINK THE WATER, BATHE IN IT OR COOK W WATER AND ONLY USE IT FOR FLUSHING AND FIRE EMERGENCIES. BOILING NOT REMOVE THE CHEMICALS.

THE DECLARATION IS BELIEVED TO IMPACT 100,000 CUSTOMERS, WSAZ RE

THE STATION SAID THE CHEMICAL LEAKED FROM A TANK AT FREEDOM INDUS' CHARLESTON. THE LEAKED PRODUCT IS 4-METHYLCYCLOHEXANE METHANOL, W USED IN THE FROTH FLOTATION PROCESS OF COAL WASHING AND PREPAR.

ACCORDING TO WEST VIRGINIA AMERICAN WATER, DUE TO A CHEMICAL LEAK INTO THE ELK RIVER THURSDAY, A DO NOT USE WATER ORDER HAS BEEN IS: THE COUNTIES OF BOONE, JACKSON, KANAWHA, LINCOLN, AND PUTNAM I

RESIDENTS LIVING IN THESE COUNTIES WHO USE WEST VIRGINIA AMERICAN BEING ASKED TO NOT USE TAP WATER FOR DRINKING, COOKING, WASHING, CUNTIL FURTHER NOTICE.

THE PUBLIC SERVICE DISTRICT SAYS THIS ONLY AFFECTS CUSTOMERS WHO VIRGINIA AMERICAN WATER. CUSTOMERS IN ST. ALBANS AND CEDAR GROVE AFFECTED BY THIS.

IT IS BELIEVED THAT THE MATERIAL MAY BE HAZARDOUS AND MAY HAVE ENT WATER SYSTEM.

THE GOVERNOR OF WV HAS DECLARED A STATE OF EMERGENCY.

A SPOKESPERSON FOR WEST VIRGINIA AMERICAN WATER SAYS IF YOU CAM CONTACT WITH THE WATER AND FEEL ILL, CALL THE POISON CONTROL HOTLINE 222-1222.

IMPACT

Fire Involved: NO

Fire Extinguished: UNKNOWN

INJURIES: NO FATALITIES: NO Hospitalized:

Empl/Crew:

Passen

EVACUATIONS: NO

Empl/Crew: Who Evacuated:

Passenger:

Occur

Damages:

NO

Hours

Direc

Closure Type

Description of Closure

Closed

Radius/Area:

Closu

Air:

Road:

N

Waterway:

Track:

N

Passengers Transferred: NO

Environmental Impact: UNKNOWN

Media Interest: HIGH Community Impact due to Material:

REMEDIAL ACTIONS

Release Secured: UNKNOWN

Release Rate:

Estimated Release Duration:

WEATHER

ADDITIONAL AGENCIES NOTIFIED

Federal:

EPA REGION III STATE OF WEST VIRGINIA EOC

State/Local:

State/Local On Scene:

State Agency Number:

NOTIFICATIONS BY NRC

ATLANTIC STRIKE TEAM (MAIN OFFICE)

DHS NOC (NOC)

09-JAN-14 20:00

(609) 7240008

MARCHUT

09-JAN-14 19:42 (202) 2828114

CG INVESTIGATIVE SERVICE BALTIMORE (MAIN OFFICE)

09-JAN-14 19:42

(410) 5762555

CGIS RAO ST. LOUIS (COMMAND CENTER)

09-JAN-14 19:42

(314) 2692420

CHEM SAFETY AND HAZARD INVEST BOARD (AFTER HOURS)

09-JAN-14 19:43

(202) 6312440

NO VERBAL

```
CHEM SAFETY AND HAZARD INVEST BOARD (CSB AUTOMATIC NOTIFICATIO
09-JAN-14 19:42
                    (202) 3780334
              DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
09-JAN-14 19:42
                    (202) 3661863
       DOT OFFICE OF INSPECTOR GENERAL (OFFICE OF INVESTIGATORS)
                    (202) 3295487
09-JAN-14 19:42
                         EPA OEM (MAIN OFFICE)
09-JAN-14 19:45
                    (202) 5643850
                                               GRIER
                    EPA OEM (AFTER HOURS SECONDARY)
09-JAN-14 19:48
                    (202) 5643850
                       U.S. EPA III (MAIN OFFICE)
                                             MATTLOCK
09-JAN-14 20:13
                    (215) 8143255
            NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
09-JAN-14 19:42
                    (202) 2829201
                     NOAA RPTS FOR WV (MAIN OFFICE)
09-JAN-14 19:42
                    (206) 5264911
            NATIONAL RESPONSE CENTER HQ (AUTOMATIC REPORTS)
09-JAN-14 19:42
                    (202) 2671136
                 NRC SENIOR WATCH OFFICER (MAIN OFFICE)
09-JAN-14 20:13
                    (202) 2672100
                                              MATTICE
             HOMELAND SEC COORDINATION CENTER (MAIN OFFICE)
                     (202) 2828300
09-JAN-14 19:42
                          ORSANCO (MAIN OFFICE)
09-JAN-14 19:42
                     (513) 2317719
                  SECTOR OHIO VALLEY (COMMAND CENTER)
09-JAN-14 19:42
                     (502) 7795424
           OFFICE OF ENV. POLICY & COMPLIANCE (MAIN OFFICE)
09-JAN-14 19:42
                     (215) 5975012
                     USCG DISTRICT 8 (MAIN OFFICE)
09-JAN-14 19:42
                     (504) 5896225
                    WEST VIRGINIA DEP (MAIN OFFICE)
09-JAN-14 19:42
                     (304) 5585938
                WV DEP ATTN: DUTY OFFICER (MAIN OFFICE)
09-JAN-14 19:42
                     (800) 6423074
                    WV DEP SPILL LINE (MAIN OFFICE)
09-JAN-14 19:42
                     (304) 3683960
            WV INTELLIGENCE/FUSION CENTER (COMMAND CENTER)
09-JAN-14 19:42
                     (304) 5584831
```

ADDITIONAL INFORMATION

*** END INCIDENT REPORT # 1070627 ***
Report any problems by calling 1-800-424-8802
PLEASE VISIT OUR WEB SITE AT http://www.nrc.uscg.mil

12/01/2011 12:00 PM

Here is my complaint.

Robert F. Kelly OSC, Region III 1650 Arch Street, 8th Floor, Mail Code 3HS32 Philadelphia, PA 19103 215-814-3268 (voice) 215-266-7456 (cell) 215-814-3254 FAX

email: kelly.robertj@epa.gov

"You can't always get what you WANT but if you try sometime, you'll get what you NEED. Rolling Stones

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---- Forwarded by Roberti Kelly/R3/USEPA/US on 12/01/2011 11:59 AM -----

From: Fran Burns/R3/USEPA/US

To: Robertj Kelly/R3/USEPA/US@EPA

Date: 11/21/2011 04:49 PM Subject: Fw: St. Albans complaint

Bob:

Take a look at this and let's talk. Maybe something that Francisco can do.

Fran

---- Forwarded by Fran Burns/R3/USEPA/US on 11/21/2011 04:49 PM ----

From: "Martin, Donald W" < Donald.W.Martin@wv.gov>

To: Fran Burns/R3/USEPA/US@EPA

Cc: <Ken.W.Ellison@wv.gov>, "DeRaimo, Kenna M" <Kenna.M.DeRaimo@wv.gov>

Date: 11/21/2011 03:45 PM Subject: St. Albans complaint

Hi Fran,

As discussed, here are the identifiers for the two sites I mentioned, across the tracks from 2nd Ave., North, in St. Albans.

Kanawha Co. landfill - EPA ID: WVD980537344 Marlaing Addition - EPA ID: WVD988786125

I tried to depict their approximate locations on the attached Google map based on the topo maps in our

scanned files.

As noted, Ms. Glover's concern focuses on the brown stuff used for dust suppressant on 2^{nd} Ave. N., between Rt. 35 and the railroad tracks.

Let me know if there are any questions.

Thanks,

Don Martin

304-926-0499, ext. 1275

[attachment "Lena Glover complaint 10-31-11.pdf" deleted by Robertj Kelly/R3/USEPA/US]



STATE OF WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Earl Ray Tomblin Governor Michael J. Lewis, M.D., Ph.D. Cabinet Secretary

February 22, 2012

Lora Siegmann Werner, MPH Agency for Toxic Substances and Disease Registry, Region 3 Department of Health and Human Services 1650 Arch Street, 3HS00 Philadelphia, PA 19103

Dear Ms. Werner:

In response to your data request regarding cancer rates in Saint Albans, West Virginia, the West Virginia Cancer Registry has compared cancer incidence rates for Kanawha County with the state as a whole. The information is provided in the form of a single table (**Table 1**). At this time, the West Virginia Cancer Registry is unable to assess cancer rates for geographical areas smaller than the county level. This is due to the fact that in West Virginia, the cancer patient's address reported to the West Virginia Cancer Registry is often a Post Office Box or other non-descriptive address that does not reflect the actual physical location of the patient's residence.

Compared to the state as a whole, Kanawha County had statistically significantly higher rates of all cancer sites combined and melanoma of the skin. No significant associations were observed for any other cancer site during the time period under investigation.

Should you need any additional information, please feel free to contact me at (304) 356-4008 or by email at Alana.L.Hudson@wv.gov.

Sincerely,

Alana Hudson, PhD, MPH

Epidemiologist

cc: Marian Swinker, MD, MPH

Loretta Haddy, PhD, MA, MS

Myra Fernatt

Table 1. Age-Adjusted (2000 US Standard) Average Annual (2004-2008)
Incidence Rates per 100,000 by Cancer Type,
Kanawha County and West Virginia

Site	Kanawha County	West Virginia
All Site Cancer	529.6 (516.5-542.7)	500.8 (496.5-505.0)
Bone	1.1 (0.4-1.7) 1.0 (0.8-1.2)	
Brain & Other Nervous System	8.1 (6.4-9.8) 7.0 (6.7-7.4)	
Breast (Female Only)	123.3 (114.5-132.0)	113.1 (110.4-115.9)
Buccal Cavity & Pharynx	12.2 (10.2-14.1)	11.5 (10.8-12.1)
Cervix	11.6 (8.6-14.6)	9.6 (8.8-10.5)
Colon & Rectum	52.4 (48.3-56.4)	55.2 (53.8-56.5)
Corpus-Uterus	27.3 (23.2-31.5)	29.1 (27.6-30.5)
Esophagus	5.1 (3.8-6.3)	5.2 (4.8-5.6)
Eye	1.7 (0.9-2.5)	1.0 (0.8-1.2)
Gallbladder	1.3 (0.6-1.9)	1.2 (1.0-1.4)
Hodgkin's Disease	3.7 (2.4-4.9)	2.9 (2.5-3.2)
Kidney & Renal Pelvis	18.1 (15.7-20.5)	16.7 (15.9-17.5)
Larynx	4.9 (3.7-6.1)	5.3 (4.9-5.7)
Leukemia	15.2 (12.9-17.4)	13.8 (13.1-14.5)
Liver & Bile Duct	5.2 (3.9-6.5)	4.8 (4.4-5.2)
Lung & Bronchus	95.3 (89.8-100.7)	91.5 (89.8-93.3)
Melanoma of the Skin	22.5 (19.7-25.2)	18.8 (17.9-19.6)
Multiple Myeloma	5.8 (4.5-7.2)	5.5 (5.0-5.9)
Non-Hodgkin's Lymphoma	21.2 (18.6-23.8)	20.3 (19.5-21.2)
Ovary	12.3 (9.6-15.0)	13.1 (12.1-14.0)
Pancreas	11.0 (9.2-12.9)	10.5 (9.9-11.2)
Penis	1.0 (0.1-1.8)	1.0 (0.7-1.3)
Prostate	155.0 (144.4-165.6)	141.2 (137.9-144.5
Small Intestine	1.9 (1.1-2.6)	1.9 (1.6-2.1)
Soft Tissue	3.8 (2.6-5.0)	3.2 (2.9-3.6)
Stomach	6.4 (5.0-7.8)	5.8 (5.4-6.3)
Testis	6.2 (3.8-8.6)	5.3 (4.6-6.0)
Thyroid	12.9 (10.7-15.1)	10.8 (10.2-11.5)
Urinary Bladder	23.4 (20.7-26.0)	23.6 (22.7-24.5)
Vagina	0.8 (0.2-1.5)	0.8 (0.5-1.0)
Vulva	3.7 (2.2-5.2)	3.1 (2.7-3.6)

Data provided by the West Virginia Cancer Registry.

^{*}Bold face and highlighted cell indicates statistically significant difference between county and state rates.



RE: 2nd St. Alban's complaint Lora Werner to: Fernatt, Myra N Cc: "Hudson, Alana L", Ana Pomales

erner to: Fernatt, Myra N 02/22/2012 01:36 PM

From: Lora Werner/R3/USEPA/US

To: "Fernatt, Myra N" < Myra.N.Fernatt@wv.gov>

Cc: "Hudson, Alana L" <Alana.L.Hudson@wv.gov>, Ana Pomales/R3/USEPA/US

Thank you very much Myra. This is clearly an important issue for evaluating geographic information in your cancer registry. For the future if this eventually results in better physical address collection for WV cases that seems like an important positive step, I hope that ends up being feasible for you all!

We will do our best to communicate with the concerned residents with the county-level information once your final letter is cleared, and go from there. Thank you for sharing this with us now. We really appreciate all the work of your registry.

Best, Lora

Lora Siegmann Werner, MPH
Senior Regional Representative
Agency for Toxic Substances and Disease Registry (ATSDR), Region 3
Department of Health and Human Services
1650 Arch Street, 3HS00, Philadelphia, PA 19103
phone: 215-814-3141, fax: 215-814-3003

cell: 215-588-9778 email: lkw9@cdc.gov

CDC.gov is Your Online Source for Credible Health Information . Visit www.cdc.gov.

"Fernatt, Myra N" Lora, I wanted to update you on some decisions... 02/22/2012 12:33:45 PM

From: "Fernatt, Myra N" < Myra.N.Fernatt@wv.gov>

To: Lora Werner/R3/USEPA/US@EPA

Cc: "Hudson, Alana L" <Alana.L.Hudson@wv.gov>

Date: 02/22/2012 12:33 PM

Subject: RE: 2nd St. Alban's complaint

Lora,

I wanted to update you on some decisions we have had to make in the West Virginia Cancer Registry regarding community level data analysis. Now that we have had a chance to review our address data in greater detail, we are seeing that as many as 25% or more of our addresses are PO boxes, rural routes, and highway contract addresses. These types of addresses are basically associated with the zip code of the post office that delivers the mail. Many of these cases will have a certain zip code address, but the person does not actually live in that zip code. In working with small numbers as we are, just one or two cases can be the difference between something being statistically significant or not. Considering the high number of addresses that are not actual street addresses, we do not feel that our zip code level analysis is yielding meaningful results. In other words, we could say that something is significant when it is not, or we could say that something is not significant when it fact it may be. We have discussed this issue with the Commissioner of the Bureau for Public Health, and we've decided to review data only at the

county level until we can determine how best to handle these address issues, and what must be done in order to attain physical addresses on future cases.

In light of this, we have created a table that shows Kanawha County cancer rates (the county in which St. Albans lies) compared to West Virginia rates, by several primary sites. I know this is not "community level" data, but I hope you will still find it useful in your investigations. Our draft letter is currently being reviewed for approval and release, but I wanted to send this e-mail to give you a heads-up on this issue. Please give me a call if you need to discuss this further.

Regards, Myra

Myra Fernatt, Director
West Virginia Division of Cancer Epidemiology
350 Capitol Street, Room 125
Charleston, WV 25301-3715
(304) 356-4051 voice
(304) 558-4463 fax
Myra.N.Fernatt@wv.gov

----Original Message----

From: Lora Werner [mailto:Werner.Lora@epamail.epa.gov]

Sent: Thursday, December 22, 2011 10:20 AM

To: Fernatt, Myra N

Cc: Ana Pomales; Robertj Kelly

Subject: Re: 2nd St. Alban's complaint

Hi Myra

Thank you so much! Your proposal sounds fine. A letter back to us with whatever summary info seems most appropriate to you will be great.

Bob and Ana, once we have this info back from WV then we could plan a joint call back to the residents.

Happy holidays, everybody - Lora

Lora Siegmann Werner, ATSDR/CDC Region 3

---- Original Message ----

From: "Fernatt, Myra N" [Myra.N.Fernatt@wv.gov]

Sent: 12/22/2011 10:04 AM EST

To: <1kw9@cdc.gov>

Cc: Ana Pomales; Robertj Kelly

Subject: RE: 2nd St. Alban's complaint

Hello Lora,

We have nearly completed our review of cancer data in the St. Albans, WV, area. We had previously suggested that we respond directly to these two citizens, but we are rethinking our protocol for responding to cancer concerns such as these. We think it might be best if we provide information back to you, since your agency received the original complaint/request. You could then provide the information to the citizen with your information so the citizen is

dealing with one agency at that point. If the citizen wanted to communicate directly with us after that, that would be fine.

If you are okay with this strategy, what type of information would you like to receive, or what format? We suggest that we simply write a letter addressed to you, referencing the citizen's issue, and provide a summary of our findings in the letter. Since we review the data in so many different ways (primary site, sometimes age, sometimes sex, etc.), this review generates a lot of data tables. It would be difficult to decide what sort of tables to provide to you, so a summary in letter form would probably be best.

Please let me know if this works for you and we'll get the letters drafted and to you in the near future.

Thanks, Myra

Myra Fernatt, Director
West Virginia Division of Cancer Epidemiology
350 Capitol Street, Room 125
Charleston, WV 25301-3715
(304) 356-4051 voice (NEW NUMBER)
(304) 558-4463 fax
Myra.N.Fernatt@wv.gov

----Original Message----

From: lkw9@cdc.gov [mailto:lkw9@cdc.gov] Sent: Thursday, December 01, 2011 01:01 PM

To: Fernatt, Myra N

Cc: Pomales.Ana@epamail.epa.gov; Kelly.Robertj@epamail.epa.gov

Subject: Fw: 2nd St. Alban's complaint

Hi Myra

Thanks again for our conversation today.

Here is the 2nd St. Alban's cancer concern that we discussed.

We will all stay in touch!

Best, Lora

(See attached file: Saint Albans Cancer Concern WV 10-31-2011 correspondence plus photos.PDF)

Lora Siegmann Werner, MPH Senior Regional Representative

Agency for Toxic Substances and Disease Registry (ATSDR), Region 3 Department of Health and Human Services 1650 Arch Street, 3HS00, Philadelphia, PA 19103

phone: 215-814-3141, fax: 215-814-3003

cell: 215-588-9778 email: lkw9@cdc.gov

CDC.gov is Your Online Source for Credible Health Information. Visit www.cdc.gov.

---- Forwarded by Lora Werner/R3/USEPA/US on 12/01/2011 12:06 PM -----

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| From:
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|Robertj Kelly/R3/USEPA/US
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| To: |
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|Lora Werner/R3/USEPA/US@EPA, Ana Pomales/R3/USEPA/US
|---->
| Date: |
|---->
______
|12/01/2011 12:00 PM
>-----
_____
| Subject: |
|Fw: St. Alban's complaint
1
Here is my complaint.
Robert F. Kelly
OSC, Region III
1650 Arch Street, 8th Floor, Mail Code 3HS32 Philadelphia, PA 19103
215-814-3268 (voice)
215-266-7456 (cell)
215-814-3254 FAX
email: kelly.robertj@epa.gov
"You can't always get what you WANT but if you try sometime, you'll get what
you NEED. Rolling Stones
This e-mail, including any attached files, may contain confidential and
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privileged information for the sole use of the intended recipient (s). Any review, use, distribution or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive information for the recipient), please contact the sender by reply e-mail and delete all copies of this message. Thank you. Forwarded by Robertj Kelly/R3/USEPA/US on 12/01/2011 11:59 AM
> From:
> Fran Burns/R3/USEPA/US
>
> Robertj Kelly/R3/USEPA/US@EPA
> Date: >
11/21/2011 04:49 PM
> Subject: >
> Fw: St. Albans complaint
>
Bob:
Take a look at this and let's talk. Maybe something that Francisco can do.

Fran

Forwarded by Fran Burns/R3/USEPA/US on 11/21/2011 04:49 PM > From:
>
"Martin, Donald W" <donald.w.martin@wv.gov></donald.w.martin@wv.gov>
>
> To:
>
Fran Burns/R3/USEPA/US@EPA
>
> Cc:
>
<ken.w.ellison@wv.gov>, "DeRaimo, Kenna M" <kenna.m.deraimo@wv.gov></kenna.m.deraimo@wv.gov></ken.w.ellison@wv.gov>
>
> Date: >
>
11/21/2011 03:45 PM
>
> Subject: >
>
St. Albans complaint
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Hi Fran,

As discussed, here are the identifiers for the two sites I mentioned, across the tracks from 2nd Ave., North, in St. Albans.

Kanawha Co. landfill - EPA ID: WVD980537344

Marlaing Addition - EPA ID: WVD988786125

I tried to depict their approximate locations on the attached Google map based on the topo maps in our scanned files.

As noted, (b) (6) concern focuses on the brown stuff used for dust suppressant on 2nd Ave. N., between Rt. 35 and the railroad tracks.

Let me know if there are any questions. Thanks, Don Martin 304-926-0499, ext. 1275

[attachment "(b) (6) complaint 10-31-11.pdf" deleted by Robertj Kelly/R3/USEPA/US]



Re: 2nd St. Alban's complaint Lora Werner to: Ana Pomales

03/14/2012 11:18 AM

Very nice!! Lora Siegmann Werner, ATSDR/CDC Region 3 Ana Pomales

---- Original Message -----From: Ana Pomales

Sent: 03/14/2012 10:52 AM EDT

To: "Hudson, Alana L" <Alana.L.Hudson@wv.gov>; "Fernatt, Myra N"

<Myra.N.Fernatt@wv.gov> Cc: Lora Werner

Subject: Re: 2nd St. Alban's complaint

Hello Alana and Myra

Hope this email finds you well. I am writing to let you know that we just had a discussion with the EPA OSC working on this site. We discussed your letter and recommended against conducting environmental sampling. We feel that sampling will not help answer the questions raised by these residents. More specifically so since we have very limited information about a contamination source and no evidence of exposure to contaminants that would result in health effects. The OSC, however, plans to follow up with the resident and might offer soil testing for metals. We understand he will share your letter with her too. Lora, please add/change anything I might have missed or misinterpreted.

Alana, Myra, thanks for your help. Please do not hesitate to contact us if you have any questions.

Ana

Lora We	Thank you so much, Alana and Myra! Lora Sieg	02/28/2012 03:18:42 PM
From: To: Cc: Date: Subject:	Lora Werner/R3/USEPA/US "Hudson, Alana L" <alana.l.hudson@wv.gov>, "Fernatt, Myra N" <mana "bob="" <kelly.robertj@epa.gov="" kelly"="" pomales="" r3="" us,="" usepa="">02/28/2012 03:18 PM Re: 2nd St. Alban's complaint</mana></alana.l.hudson@wv.gov>	yra.N.Fernatt@wv.gov>
	so much, Alana and Myra!	

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Sent: 02/28/2012 02:09 PM EST
To: Lora Werner <1kw9@cdc.gov>; "Fernatt, Myra N" <Myra.N.Fernatt@wv.gov>
Cc: Ana Pomales
```

Subject: RE: 2nd St. Alban's complaint

From: "Hudson, Alana L" [Alana.L.Hudson@wv.gov]

---- Original Message -----

Hi Lora,

Attached please find a scanned copy of the letter that will be mailed to you this afternoon. The letter contains information on Kanawha County cancer rates (the county in which St. Albans lies) compared to West Virginia cancer rates. Please let me know if you have any questions, or if additional information is needed.

Thank you, Alana

Alana L. Hudson, PhD, MPH Epidemiologist Division of Cancer Epidemiology WVDHHR/BPH/OEPS 350 Capitol Street, Room 125 Charleston, WV 25301-3715 Office: 304-356-4008 Fax: 304-558-4463 Email: Alana.L.Hudson@wv.gov

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----Original Message----

From: Lora Werner [mailto:lkw9@cdc.gov] Sent: Wednesday, February 22, 2012 1:37 PM

To: Fernatt, Myra N

Cc: Hudson, Alana L; Ana Pomales

Subject: RE: 2nd St. Alban's complaint

Thank you very much Myra. This is clearly an important issue for evaluating geographic information in your cancer registry. For the future if this eventually results in better physical address collection for WV cases that seems like an important positive step, I hope that ends up being feasible for you all!

We will do our best to communicate with the concerned residents with the county-level information once your final letter is cleared, and go from there. Thank you for sharing this with us now.

We really appreciate all the work of your registry.

Best, Lora

Lora Siegmann Werner, MPH
Senior Regional Representative
Agency for Toxic Substances and Disease Registry (ATSDR), Region 3 Department
of Health and Human Services
1650 Arch Street, 3HS00, Philadelphia, PA 19103
phone: 215-814-3141, fax: 215-814-3003
cell: 215-588-9778
email: lkw9@cdc.gov

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From: "Fernatt, Myra N" <Myra.N.Fernatt@wv.gov>

To: Lora Werner/R3/USEPA/US@EPA

Cc: "Hudson, Alana L" <Alana.L.Hudson@wv.gov>

Date: 02/22/2012 12:33 PM

Subject: RE: 2nd St. Alban's complaint

Lora,

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Charleston, WV 25301-3715
(304) 356-4051 voice
(304) 558-4463 fax
Myra.N.Fernatt@wv.gov

----Original Message----

From: Lora Werner [mailto:Werner.Lora@epamail.epa.gov]

Sent: Thursday, December 22, 2011 10:20 AM

To: Fernatt, Myra N

Cc: Ana Pomales; Robertj Kelly

Subject: Re: 2nd St. Alban's complaint

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Lora Siegmann Werner, ATSDR/CDC Region 3

---- Original Message ----

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Cc: Ana Pomales; Robertj Kelly

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(304) 356-4051 voice (NEW NUMBER)
(304) 558-4463 fax
Myra.N.Fernatt@wv.gov

----Original Message----

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To: Fernatt, Myra N

Cc: Pomales.Ana@epamail.epa.gov; Kelly.Robertj@epamail.epa.gov

Subject: Fw: 2nd St. Alban's complaint

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(See attached file: Saint Albans Cancer Concern WV 10-31-2011 correspondence
plus photos.PDF)
Lora Siegmann Werner, MPH
Senior Regional Representative
Agency for Toxic Substances and Disease Registry (ATSDR), Region 3 Department
of Health and Human Services 1650 Arch Street, 3HS00, Philadelphia, PA 19103
phone: 215-814-3141, fax: 215-814-3003
cell: 215-588-9778
email: lkw9@cdc.gov
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www.cdc.gov.
---- Forwarded by Lora Werner/R3/USEPA/US on 12/01/2011 12:06 PM ----
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| From: |
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 |Robertj Kelly/R3/USEPA/US
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| To: |
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|Lora Werner/R3/USEPA/US@EPA, Ana Pomales/R3/USEPA/US
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|Fw: St. Alban's complaint
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Robert F. Kelly
OSC, Region III
1650 Arch Street, 8th Floor, Mail Code 3HS32 Philadelphia, PA 19103
215-814-3268 (voice)
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215-814-3254 FAX
email: kelly.robertj@epa.gov
"You can't always get what you WANT but if you try sometime, you'll get what
you NEED. Rolling Stones
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privileged information for the sole use of the intended recipient (s).
Any
review, use, distribution or disclosure by others is strictly prohibited. If
you are not the intended recipient (or authorized to receive information for
the recipient), please contact the sender by reply e-mail and delete all
copies of this message. Thank you.
---- Forwarded by Robertj Kelly/R3/USEPA/US on 12/01/2011 11:59 AM
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| From:
|Fran Burns/R3/USEPA/US
>-----
_____
|---->
| To: |
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Robertj Kelly/R3/USEPA/US@EPA
> Date: >
> 11/21/2011 04:49 PM
> Subject: >
Fw: St. Albans complaint
]
Bob: Take a look at this and let's talk. Maybe something that Francisco can do. Fran
Forwarded by Fran Burns/R3/USEPA/US on 11/21/2011 04:49 PM > From:
> "Martin, Donald W" < Donald.W.Martin@wv.gov>
>

To:
Fran Burns/R3/USEPA/US@EPA
>
> Cc:
<ken.w.ellison@wv.gov>, "DeRaimo, Kenna M" <kenna.m.deraimo@wv.gov></kenna.m.deraimo@wv.gov></ken.w.ellison@wv.gov>
>
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> Subject: >
>
St. Albans complaint
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Marlaing Addition - EPA ID: WVD988786125

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Thanks,
Don Martin
304-926-0499, ext. 1275
[attachment "(b) (6) complaint 10-31-11.pdf" deleted by Robertj
Kelly/R3/USEPA/US]